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## High Prevalence of Tobacco Product and E-cigarette Use among Electronic Dance Music Party Attendees

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### Abstract

Electronic dance music (EDM) party attendees are at high risk for use of various illegal drugs; however, little is known about their tobacco use. Understanding tobacco use patterns in this population at high risk for illegal drug use can inform multi-product interventions. 954 EDM party attendees (ages 18-40) were surveyed in New York City in 2017. We estimated prevalence of use of cigarettes, hookah, cigars, other tobacco, and e-cigarettes and delineated predictors of current (past-month) use using bivariable and multivariable models. Past-month use of cigarettes (36.2%), e-cigarettes (15.6%), cigars (12.5%), and hookah (11.7%) in particular was prevalent. In multivariable models, females were less likely to use e-cigarettes than males (adjusted prevalence ratio [aPR]=0.63, p=.030), and those who attended graduate school were less likely to use cigarettes (aPR=0.55, p=.003) and/or e-cigarettes (aPR=0.33, p=.026). Past-year ecstasy/MDMA/Molly use was a risk factor for past-month use of cigarettes (aPR=1.38, p=.013) and/or cigars (aPR=1.61, p=.032), and past-year cocaine use was a risk factor for past-month use of cigarettes (aPR=1.80, p<.001), cigars (aPR=1.80, p=.013), other tobacco products (aPR=3.05, p=.003), and/or e-cigarettes (aPR=2.39, p=.003). 55.4% of ecstasy users and 60.3% of cocaine users were current cigarette smokers, but use of other products among users of these drugs was less prevalent (9.8-27.9%). Results suggest that current tobacco use is prevalent in this population who is also at high risk for use of drugs such as ecstasy and cocaine. Prevention and cessation efforts need to target tobacco users in this scene while incorporating components addressing illegal drug use.

### Keywords

cigarettes; hookah; e-cigarettes; nightlife; electronic dance music

## Introduction

The popularity of electronic dance music (EDM) parties has increased in recent years. This party-attending population is at very high risk for use of various illegal drugs (Palamar, Griffin-Tomas, and Ompad 2015, Palamar et al. 2016); however, little research has focused on tobacco use in this high-risk population. In recent years, the tobacco control landscape has shifted away from the predominance of traditional cigarette smoking, particularly among young and middle-age adults, towards several alternative tobacco (e.g., cigars and hookah) and nicotine-containing products (e.g., e-cigarettes). Specifically, cigarette smoking has been declining and use of such alternative products is on the rise (Cullen et al. 2018). There is ample evidence supporting a significant association between cigarette smoking and illegal substance use, which is consistent in all age groups in the US (Haardörfer et al. 2016). Nevertheless, patterns of use of alternative tobacco and nicotine products among high-risk populations have not been thoroughly investigated, and this could represent another population to target with interventions.

In general, users of illegal drugs have higher rates of cigarette smoking than the general population; they also report fewer quit attempts, and are more likely to die from smoking-related causes than other substance-related illnesses (Martínez et al. 2015). Whether the impact of using alternative tobacco products is similar to that of cigarettes among populations with high prevalence of illegal drug use, is unknown. Understanding the risk factors associated with alternative tobacco use is of ample importance in informing prevention and cessation interventions. The aims of this study are to estimate prevalence of use (and willingness to use) of various tobacco and nicotine containing products among EDM party attendees and to delineate correlates of use.

## Methods

### Study Design

EDM party attendees (ages 18-40) were surveyed outside of randomly selected nightclubs and festivals throughout the summer of 2017 in New York City. Our approach of surveying individuals entering this scene is ideal for reaching “hidden populations” (Watters and Biernacki 1989). Time-space sampling was utilized to randomly select different parties each week (Jenness et al. 2011). Specifically, each week, a list of upcoming EDM parties in NYC was created. The list was based on party listings on social media, EDM ticket websites, and recommendations from key informants. Parties from EDM ticket websites were eligible for random selection if 15 tickets were purchased for the party by mid-week. Parties were randomly selected using R software (R-Core Team 2019). Recruitment was typically on one or two nights per week (Thursday through Sunday). We could not, however, randomly select time slots. Recruitment took place in 2-3 hour time slots typically between 11:30pm and 1:30am because the majority of parties ended at 4am (with very few ending later). Participants were also surveyed outside of two large daytime festivals which were not formally randomly selected.

Individuals were deemed eligible if they were between ages 18 and 40 and about to enter the randomly selected party. Trained recruiters approached passersby (who were alone or in

groups), and if confirmed eligible, they were asked if they would be willing to take a survey about drug use. Surveys were conducted on electronic tablets, and participants provided informed consent on the first page of the survey. Surveys were conducted in areas (sidewalks) recruiters deemed safe—typically close to or around the corner from nightclub entrances. Recruiters were present to help ensure privacy and safety during self-administration of the surveys. The response rate was 74% and 954 attendees were surveyed. This study was approved by the New York University Langone Medical Center institutional review board.

## Measures

Participants were first asked about sociodemographic characteristics including gender, age, race/ethnicity (i.e., white, black, Hispanic, Asian, other/mixed), education (i.e., high school diploma or less, some college, college degree, graduate school), weekly income (i.e., <\$500 per week, \$500 per week), and sexual orientation (i.e., heterosexual, gay/lesbian, bisexual/other sexuality). They were then asked about lifetime, past-year, and current (past-month) use of various smoking products. Specifically, we asked participants to check off whether they had used cigarettes, hookah (waterpipe, shisha), cigars (including little cigars and cigarillos), e-cigarettes, and/or other tobacco products (without listed examples). We further coded responses into variables indicating whether the participant 1) never used, 2) used in his or her lifetime, but not in the past year, 3) used in the past year, but not in the past month, or 4) used in the past month. We also coded a binary variable for each product indicating whether they used in the past month. All participants were also asked about willingness to use each product which was defined as reporting willingness to use if offered by a friend in the next 30 days. In addition, participants were asked if they have used various illegal drugs in the past-year. In this analysis we focus on the two most prevalent party drugs used in this scene—ecstasy/MDMA/Molly and cocaine(Griffin et al. 2019, Palamar et al. 2017). Participants were also asked about frequency of EDM party attendance.

## Probability Weights and Data Analysis

We calculated the selection probability of each participant based on frequency of self-reported EDM party attendance and on party-level responses rates(MacKellar et al. 2007) and weighted prevalence estimates by the inverse of that probability(Jenness et al. 2011). We thus up-weighted participants believed to have a lower probability of selection (those who attend less frequently and thus were less likely to be surveyed) and down-weighted those believed to have a higher probability of selection (those who attend more frequently and thus were less likely to be surveyed). This method has been used in other studies utilizing venue-based sampling (MacKellar et al. 2007, Jenness et al. 2011). This was done in order to compute estimates which we believe correspond to the entire NYC EDM party-attending population, rather than just describing the analytic sample. We accounted for the complex sample design by utilizing these weights and Taylor series estimation which was used to obtain accurate standard errors and allow us to make estimates about prevalence of use in this population (Heeringa, West, and Berglund 2010).

We first estimated prevalence of use lifetime, past-year, and past-month use of each tobacco product, and estimated willingness to use in the next 30 days if offered by a friend. Next, we

examined whether sociodemographic and drug use variables were associated with past-month use of each of the five products examined. We examined potential associations in a bivariable manner first using chi-square (with past-month use of each product as separate dependent variables) and then we fit all independent variables into multivariable models to determine associations with all else being equal. Specifically, we fit variables into generalized linear models using Poisson and log link, which generated adjusted prevalence ratios (aPRs). We used prevalence ratios instead of odds ratios because many outcomes were highly prevalent (e.g., >10%) which can lead to inflation of estimates when using odds ratios (Thompson, Myers, and Kriebel 1998). Finally, we compared recency of use of each product (defined as “never used”, used in lifetime but not in the past 12 months, use in the last 12 months but not in the past month, or use in the past month) according to self-reported willingness to use in the next 30 days if offered by a friend using chi-square.

## Results

The majority of the sample identified as male (51.3%), age 25-40 (54.6%), and white (52.1%). A fifth (20.0%) identified as Hispanic, 13.6% Asian, 7.4% black, and 6.9% identified as other/mixed race. Half (50.1%) of the sample reported earning \$500 per week, and with regard to education, 16.5% had a high school diploma or less, 27.1% had attended some college, 45.4% had a college and 11.0% had attended graduate school. The majority identified as heterosexual (83.5%), followed by 11.1% identifying as bisexual or other sexuality, and 5.4% identifying as gay/lesbian. A quarter (25.0%) used ecstasy in the past year and a quarter (25.4%) used cocaine in the past year.

Table 1 presents prevalence estimates of tobacco and e-cigarette use. Cigarettes were the most prevalent product used in the past year (46.2%) and in the past month (36.2%), and 40.1% are willing to use in the next month if offered. Cigarettes (59.4%) and hookah (59.8%) had the highest lifetime prevalence and were about equally prevalent. A quarter are estimated as having used hookah (26.3%), cigars (25.8%), and/or e-cigarettes (25.7%) in the past year, and over a tenth are estimated as having used hookah (11.7%), cigars (12.5%), and/or e-cigarettes (15.6%) in the past month.

With regard to potential differences in sample characteristics regarding past-month use of each tobacco product (Table 2), there were no significant differences regarding age, race/ethnicity, education, or weekly income. However, compared to males, females were less likely to report past-month use of cigarettes (30.9% vs. 41.2%,  $p=.028$ ), cigars (9.5% vs. 15.3%,  $p=.003$ ), other tobacco (3.8% vs. 9.2%,  $p=.007$ ), and e-cigarettes (11.3% vs. 19.7%,  $p=.009$ ). With regard to sexual orientation, over two-thirds (67.1%) of those identifying as gay/lesbian reported current cigarette smoking while only a third (33.5%) of heterosexual participants reporting being current cigarette smokers ( $p=.006$ ). Sexual orientation was not related to current use of other products. Past-year ecstasy users were more likely to use cigarettes (55.4% vs. 29.9%,  $p<.001$ ), hookah (16.3% vs. 10.2%,  $p=.045$ ), cigars (19.9% vs. 10.0%,  $p<.001$ ), other tobacco (9.8% vs. 5.5%,  $p=.030$ ), and e-cigarettes (22.1% vs. 13.5%,  $p=.020$ ) compared to non-past-year users, and past-year cocaine users were more likely to use cigarettes (60.3 vs. 28.0%,  $p<.001$ ), cigars (20.2% vs. 9.8%,  $p=.002$ ), other tobacco

(12.8% vs. 4.4%,  $p=.003$ ), and e-cigarettes (27.9% vs. 11.4%,  $p<.001$ ) than non-past-year users.

Table 3 presents our models examining these factors in a multivariable manner. With all else being equal, females were less likely than males to use e-cigarettes in the past month (aPR=0.63,  $p=.030$ ), and Hispanic individuals (aPR=0.56,  $p=.039$ ) and those of other/mixed race (aPR=0.39,  $p=.030$ ) were less likely to use e-cigarettes in the past month than white individuals. With regard to educational attainment, as education increased, the risk of past-month cigarette use decreased, and having a college degree was associated with decreased risk of past-month other tobacco use (aPR= 0.37,  $p=.036$ ) and having attended graduate school was associated with decreased risk of past-month e-cigarette use (aPR= 0.33,  $p=.026$ ), compared to those with less than a high school diploma. Compared to those identifying as heterosexual, those identifying as gay/lesbian were at increased risk for past-month use of cigarettes (aPR=1.71,  $p=.001$ ). With regard to past-year drug use, ecstasy use was associated with increased risk for past-month use of cigarettes (aPR=1.38,  $p=.013$ ) and cigars (aPR=1.61,  $p=.032$ ), and cocaine use was associated with increased risk for past-month use of cigarettes (aPR=1.80,  $p<.001$ ), cigars (aPR=1.80,  $p=.013$ ), other tobacco (3.05,  $p=.003$ ), and e-cigarettes (aPR=2.39,  $p=.003$ ).

Table 4 presents willingness to use each product (in the next month if offered by a friend) according to recency of use. Never-users of these products had a low prevalence of willingness to use (ranging from 3.4% willing to use other tobacco to 7.4% willing to use hookah). About a fifth of lifetime (but not past-year) users of cigarettes (18.1%), cigars (22.1%), other tobacco (22.9%), and e-cigarettes (21.3%) were willing to use while over a third (35.7%) of lifetime (but not past-year) hookah users were willing to use. Almost a quarter (73.3%) of past-year (but not past-month) users of hookah were willing to use, and over half of past-year (but not past-month) users of cigarettes (55.4%), cigars (53.1%), and other tobacco (51.5%) were willing to use these products. Finally, the majority of past-month users of each of these substances were willing to use if offered with the highest prevalence being among cigarette smokers (82.2%).

## Discussion

This EDM party-attending population is at very high risk for use of various illegal drugs (Palamar, Griffin-Tomas, and Ompad 2015, Palamar et al. 2016); however, little research has focused on tobacco use in this high-risk population. The prevalence estimates of ever- and past-month use of each tobacco and nicotine product examined in this high-risk population were found to be more than double the prevalence estimates in the general population (Park et al. 2017, Regan et al. 2013, Phillips et al. 2017, Chen et al. 2016, Berg et al. 2015), suggesting this population is also at high risk for use (and current use) of these products.

We found some similarities between EDM party attendees and members of the general population who use these products, such as that being male was associated with past-month use of most tobacco products queried in our survey (Phillips et al. 2017) (although this association only remained in the multivariable model for e-cigarettes). Female gender has been a longstanding protective factor against tobacco use. However, with the changing

tobacco use landscape, this is changing in the general population where the gap in tobacco use prevalence is becoming narrower between males and females (McHugh et al. 2018), as well as among EDM parties attendees. Nevertheless, reported hookah use in particular was not significantly different by gender, education, or sexual orientation. Most hookah users are drawn to this product for social aspects involved in use (Haddad et al. 2015). Given that our sample consisted of EDM party attendees, we assume that many are generally socially active and could be largely using hookah as a social activity. Given the typical social setting of hookah use, we should explore whether use of marijuana and/or other illegal drugs take place in this same social/group setting for hookah use or use of other substances simply takes place in other settings among hookah users. These use behaviors or environments could impact the consumption of different substances (Redonnet et al. 2012). Results are corroborated by the fact that willingness to use hookah if offered by a friend within the next month was second-highest to cigarettes. Social influence seems to impact hookah use among populations in high-risk settings; a novel finding in the hookah literature. This suggests that hookah may attract people who are prone to less risk-taking behavior within at risk-populations.

With regard to willingness to use tobacco or nicotine products in the next month, willingness was almost double the reported prevalence of past-year use for all non-cigarette products suggesting that use of these products could potentially increase in this population, or that such attendees may be more prone to try non-cigarette products or perhaps use more products. Hookah in particular had the highest prevalence of willingness to use among never-users, lifetime users who have not used in the past year, and among past-year users who did not use in the past month, suggesting this product in particular may increase in prevalence among individuals in this population. Hookah use is often perceived to be less risky and more acceptable to use in comparison to other combustible tobacco products (Haddad et al. 2015). Most past-month users of each product were willing to use again if offered; however, not all indicated they were willing to use their current product in the next month if offered by a friend. While this is not necessarily an indication of interest in ceasing use, it does reflect that these users may be less committed to the continued use of these products. We believe this finding reflects an opportunity for promoting cessation interventions among this population, perhaps within EDM parties. Many EDM party attendees not only need assistance with abstaining from tobacco use, but also other illegal drugs as well. Interventions designed for cessation of tobacco use may provide an opportunity to address other illegal substance use and also suggests that there is a need for cessation interventions that are designed to address multiple substance use disorders (Lisha et al. 2014).

We detected no significant differences regarding queried sociodemographic determinants and type of tobacco product used, suggesting that the known factors to influence tobacco use in the general adult population such as race, education, and income may not play as similar of a role among EDM party attendee tobacco use. Use of other drugs (specifically ecstasy and/or cocaine) was the most robust and consistent risk factor for use of the tobacco and nicotine products examined in this study. While temporality of these associations cannot be determined, use of these drugs and tobacco or nicotine products are strongly linked. It is unknown how many ecstasy and cocaine users only use tobacco or nicotine products while



high, but these findings suggest that users of such illegal drugs in this scene in particular need to be targeted for combined substance use interventions (Lisha et al. 2014, Redonnet et al. 2012).

While hookah and e-cigarettes are commonly perceived as less harmful than cigarettes (Lee et al. 2014, Park et al. 2017), their patterns of use were comparable to that of other combustible products in this study. It is unknown whether high prevalence of non-cigarette tobacco product use in this scene is associated with lower perceptions of harm. Future studies may help us further understand the determinants and other factors resulting in this high use pattern of tobacco products and e-cigarettes in this scene.

### Limitations

Results may not be generalizable to individuals outside of such party scenes. We did not randomly select events specifically catered to gay/lesbian attendees, so those who only attend such parties may be underrepresented. A true random sample was not utilized as this would not be feasible to recruit this population, but we did utilize time-space sampling, which is a probability-based approach (Jenness et al. 2011). Additionally, to maintain a reasonable survey length, we only focused on a limited number of tobacco products and grouped the remaining products as “other tobacco”, which might have affected participants endorsing this category. We did not include questions assessing frequency of tobacco use, concomitant use with illegal drugs, or where use took place (e.g., inside vs. outside EDM party environments). We also did not ask whether other drugs were added to tobacco or nicotine products queried. For example, we do not know whether marijuana was added to cigars (e.g., blunts) or whether other drugs were vaped using e-cigarette devices (as is now common) (Breitbarth, Morgan, and Jones 2018).

### Conclusions

This is the among the first studies to estimate use and correlates of use of tobacco and nicotine-containing products among EDM party attendees—a high-risk population for polysubstance use. Tobacco use prevention and cessation interventions targeting this high-risk population need to incorporate multicomponent intervention programs designed to target tobacco use, as well as other illegal drug use. Our results contribute information for designing preventive measures with EDM party attendees.

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**Table 1 –**

Estimated prevalence of tobacco products and e-cigarette use among electronic dance music party attendees in NYC

	<b>Lifetime Use % (95% CI)</b>	<b>Past-Year Use % (95% CI)</b>	<b>Past-Month Use % (95% CI)</b>	<b>Willing to Use if Offered % (95% CI)</b>
Cigarettes	59.4 (52.1, 66.3)	46.2 (38.6, 54.0)	36.2 (29.1, 44.0)	40.1 (33.2, 47.5)
Hookah	59.8 (54.4, 64.9)	26.3 (21.9, 31.2)	11.7 (8.7, 15.6)	33.8 (29.1, 38.7)
Cigars	43.3 (37.5, 49.3)	25.8 (21.2, 31.1)	12.5 (9.2, 16.6)	23.0 (19.1, 27.3)
Other Tobacco <sup>a</sup>	23.0 (18.5, 28.3)	13.1 (9.8, 17.3)	6.6 (4.1, 10.5)	13.4 (10.2, 17.4)
E-Cigarettes	40.5 (34.1, 47.2)	25.7 (20.1, 32.3)	15.6 (11.6, 20.7)	23.2 (18.7, 28.4)

*Note.* Willingness to use if offered indicates that the participant responded that he or she would use in the next 30 days if offered by a friend.

<sup>a</sup>Other tobacco includes other combustible (e.g., pipe) and smokeless products.

CI = confidence interval.

**Table 2 –**

Past-month use of specific tobacco products according to sociodemographic characteristics and drug use

	Cigarettes %	Hookah %	Cigars %	Other Tobacco <sup>a</sup> %	E-Cigarettes %
Age					
18-24	31.1	10.4	14.5	7.0	16.4
25-40	40.4	12.8	10.7	6.2	15.0
Sex					
Male	42.1 *	11.5	15.3 **	9.2 **	19.7 **
Female	30.9	12.0	9.5	3.8	11.3
Race/Ethnicity					
White	40.9	12.5	13.7	6.9	17.6
Black	37.9	15.2	15.9	13.5	22.4
Hispanic	28.5	8.3	14.0	5.6	10.0
Asian	24.5	10.6	4.5	4.7	16.5
Other/Mixed	43.9	14.3	10.7	3.4	7.4
Education					
Less than High School	43.7	13.8	18.8	10.0	18.4
Some College	33.8	12.1	13.4	6.0	18.4
College Degree	35.5	11.6	10.6	5.2	14.8
Graduate School	33.4	8.1	8.0	8.5	7.8
Weekly Income					
<\$500	31.4	11.0	13.6	4.9	14.3
\$500	41.0	12.4	11.3	8.2	16.8
Sexual Orientation					
Heterosexual	33.5 **	11.6	12.6	7.0	15.9
Gay/Lesbian	67.1	11.3	23.4	8.0	11.1
Bisexual/Other	41.6	12.6	5.7	3.0	15.2
Past-Year Ecstasy Use					
No	29.9 ***	10.2 *	10.0 ***	5.5 *	13.5 *
Yes	55.4	16.3	19.9	9.8	22.1
Past-Year Cocaine Use					
No	28.0 ***	11.2	9.8 **	4.4 **	11.4 ***
Yes	60.3	13.1	20.2	12.8	27.9

Note. Comparisons were made using chi-square.

<sup>a</sup>Other tobacco includes other combustible (e.g., pipe) and smokeless products.

\* p<.05,

\*\* p<.01,

\*\*\* p<.001

Multivariable models examining predictors of specific past-month tobacco product use according to sociodemographic characteristics and drug use

Table 3 –

	Cigarettes	Hookah	Cigars	Other Tobacco Products <sup>d</sup>	E-Cigarettes
	aPR (95% CI)	aPR (95% CI)	aPR (95% CI)	aPR (95% CI)	aPR (95% CI)
Age					
18-24	1.00	1.00	1.00	1.00	1.00
25-40	1.33 (0.94-1.88)	1.37 (0.76-2.49)	0.83 (0.49-1.4)	0.64 (0.33-1.26)	0.84 (0.49-1.44)
Sex					
Male	1.00	1.00	1.00	1.00	1.00
Female	0.85 (0.68-1.05)	1.12 (0.75-1.69)	0.73 (0.50-1.07)	0.57(0.30-1.09)	0.63 (0.41-0.95)*
Race/Ethnicity					
White	1.00	1.00	1.00	1.00	1.00
Black	0.94 (0.59-1.49)	1.29 (0.58-2.87)	1.38 (0.52-3.66)	2.36 (0.61-9.09)	1.48 (0.65-3.38)
Hispanic	0.74 (0.52-1.04)	0.62 (0.33-1.18)	1.03 (0.70-1.53)	0.78 (0.38-1.61)	0.56 (0.32-0.97)*
Asian	0.76 (0.45-1.27)	0.89 (0.48-1.67)	0.44 (0.14-1.32)	1.04 (0.36-3.06)	1.35 (0.61-2.99)
Other/Mixed	1.07 (0.68-1.69)	1.13 (0.64-2.00)	0.73 (0.31-1.74)	0.38 (0.99-1.46)	0.39 (0.17-0.91)*
Education					
Less than High School	1.00	1.00	1.00	1.00	1.00
Some College	0.68 (0.49-0.94)*	0.80 (0.45-1.42)	0.66 (0.35-1.28)	0.51 (0.20-1.30)	0.84 (0.44-1.58)
College Degree	0.60 (0.39-0.91)*	0.67 (0.35-1.28)	0.58 (0.30-1.11)	0.37 (0.14-0.93)*	0.57 (0.32-1.01)
Graduate School	0.55 (0.38-0.80)**	0.43 (0.18-1.03)	0.48 (0.17-1.35)	0.75 (0.22-2.62)	0.33 (0.13-0.87)*
Weekly Income					
<\$500	1.00	1.00	1.00	1.00	1.00
\$500	1.17 (0.87-1.57)	1.13 (0.65-1.95)	0.85 (0.51-1.41)	1.74 (0.76-3.97)	1.2 (0.77-1.88)
Sexual Orientation					
Heterosexual	1.00	1.00	1.00	1.00	1.00
Gay/Lesbian	1.71 (1.27-2.31)**	0.85 (0.23-3.19)	1.41 (0.52-3.85)	0.78 (0.15-3.98)	0.55 (0.29-1.04)
Bisexual/Other	1.15 (0.81-1.64)	0.93 (0.44-1.98)	0.44 (0.15-1.24)	0.44 (0.17-1.15)	1.02 (0.58-1.78)

	Cigarettes		Hookah		Cigars		Other Tobacco Products <sup>d</sup>		E-Cigarettes	
	aPR (95% CI)	aPR (95% CI)	aPR (95% CI)	aPR (95% CI)	aPR (95% CI)	aPR (95% CI)	aPR (95% CI)	aPR (95% CI)	aPR (95% CI)	aPR (95% CI)
Past-Year Ecstasy Use										
No	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Yes	1.38 (1.08-1.76) *	1.75 (0.99-3.12)	1.61 (1.04-2.49) *	1.31 (0.74-2.33)	1.28 (0.77-2.12)					
Past-Year Cocaine Use										
No	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Yes	1.80 (1.45-2.22) ***	0.89 (0.47-1.69)	1.80 (1.14-2.84) *	3.05 (1.49-6.22) **	2.39 (1.37-4.14) **					

Note.

<sup>d</sup>Other tobacco includes other combustible (e.g., pipe) and smokeless products.

aPR = adjusted prevalence ratio; CI = confidence interval.

\* p<.05,

\*\* p<.01,

\*\*\* p<.001

**Table 4 –**

Willingness to use specific tobacco products in relation to recency of use

	Never Users %	Ever, but Not Past-Year Users %	Past-Year, but Not Past-Month Users %	Past-Month Users %
Cigarettes	6.1	18.1	55.4	82.2
Hookah	7.4	35.7	73.3	69.2
Cigars	5.5	22.1	53.2	71.2
Other Tobacco	3.4	22.9	51.5	78.3
E-Cigarettes	6.5	21.3	41.5	76.9

*Note.* Willingness to use indicates that the participant responded that he or she would use in the next 30 days if offered by a friend. Results are based on five separate 2x4 crosstabulations and we report column percentages representing those reporting willingness to use that product within those reporting the specific level of use of the product. For example, recency of hookah use corresponds to intention to use hookah and 69.2% of those reporting past-month hookah use report willingness to use again.. All  $ps < .001$ .